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DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINING
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SALT LAKE CITY, UTAH 84115

ALUNITE

A SOCIO-ECONOMIC STUDY

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ALUNITE: A SOCIO-ECONOMIC ANALYSIS

Appendix D

Survey of Community Attitudes

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Introduction

In the main body of the socio-economic impact study for the proposed alunite development in Beaver County, data were presented from two previous community surveys that had been conducted in the primary impact area. These two surveys included several questions concerned with attitudes of Beaver and Iron County residents toward their communities generally. Also included were questions relating to public attitudes toward industrial growth and development in the local area.

Initially, the plan was to use these data to constitute the "attitudes and perceptions" part of the impact study. However, after extensive discussion with several of the principal audiences of the impact study (including Earth Sciences, Inc., Bureau of Land Management officials, and local community leaders) the decision was made to supplement the earlier studies with an additional community survey that would focus specifically on the proposed action. As soon as this decision was made, immediate steps were taken to construct an appropriate research questionnaire and to select a sample of residents in the primary impact area in order to assess attitudes and perceptions of local residents toward the proposed development. This report, included as a supplement to the basic socio-economic impact study, will present an analysis of this survey.

Questionnaire Construction and Selection of a Sample

The questionnaire developed for this supplemental survey was designed to elicit several types of information that should be useful to those community leaders and others who face the task of planning for and responding to the projected growth and change that would result from the development

of the alunite mine and processing plant in Beaver County. A complete copy of the final questionnaire is attached to this report. It will be noted that questions were included to measure familiarity with the proposed development, perceived advantages and disadvantages for local residents and communities if the development occurs, and more specific attitudes relating to the value and problems associated with industrial growth in what are basically rural areas.

Questions were also included to ascertain those perceived impacts the development would have on local facilities and life styles. For example, what did the respondent think the impact would be on the local school system, on medical and health care facilities, on local job and occupational opportunities, on family structure and community satisfaction, and so on. Other questions were included to determine the extent to which local residents perceived that the development would result in serious pollution for the area. Finally, a series of demographic items were included so that different components of the sample could be compared.

While both Iron and Beaver Counties will be impacted, projections indicate that the primary impact will be in Beaver County and, more specifically, in the Milford area. The selection of the sample was determined largely by these projections. In other words, while residents of both counties will see important social impacts, these should be felt most strongly in the Milford area. The selection of a research sample from a sampling frame that included all residents of both counties would have led to a very small representation from the Milford area (resulting, of course, from the fact that Milford accounts for a small percentage of the total two-county population). Therefore, stratification procedures were used

prior to sample selection. Specifically, the two-county area was divided into three units based on projected impact concentration. The first of these units is the Milford area (including the two communities of Milford and Minersville) where the primary impact will be felt. The second unit included the remaining portions of Beaver County, and the third unit included all of Iron County. Three samples of equal size were then selected from the designated areas. This means, of course, that a much higher proportion of the residents of the Milford area would be included in the total sample. Proportionately lower percentages of residents of Beaver County and of Iron County would be included in the respective subsamples.

A total of 120 names were selected from each of the three areas for inclusion in the sample. Obtaining a complete sampling frame from which to draw the sample in an area this large is always difficult. It was finally decided to select the sample from published telephone directories for the areas involved. As has been noted by Dillman et al. (1974), phone directories have the advantage of being readily available, fairly recent in their listings and free from legal entanglements. Further, in the areas concerned, a very high percentage (over 90 percent) of all households have listed telephones. The primary source of bias associated with this technique comes from the fact that those without telephones tend to have lower incomes (Leuthold and Scheele, 1971). However, when such a large percentage of households have telephone service this does not appear to be a serious problem.

As indicated, 120 names were selected from each of the designated sample areas. The names were selected using random sampling procedures

designed to guarantee that each possible respondent would have an equal opportunity for inclusion in the sample.

Another critical decision had to be made concerning data collection procedures. The most desirable alternative would perhaps have been to hire and train interviewers to conduct the interviews in the homes of the selected respondents. This procedure was ruled out, largely on the basis of time constraints. Instead, the decision was made to use a mail questionnaire procedure. There are several inherent problems associated with mail questionnaire surveys. It is frequently argued that such questionnaires must be limited to just a few questions, that the quality of the information obtained is often poor, and that response rates are typically very low (Dillman et al., 1974). However, recent extensive analysis on the mail questionnaire as a research tool by Dillman and his colleagues indicates that it can be an extremely useful device for collecting large amounts of data at a relatively low cost. Personal interviews are becoming increasingly costly and recent studies indicate that the refusal rate can also be a serious problem (Business Week, 1973).

Given these considerations, it was decided that the mail questionnaire procedure would be employed. The initial samples were considered to be large enough that even with the traditional low response rates, sufficient data would be available to provide useful information to local leaders and others concerned with the social impacts of the proposed action. The potential problem of a low response rate became especially critical because time constraints allowed only for the initial mailing with no follow-up. The technique developed by Dillman and his colleagues has led to return rates of 69 to 75 percent when the initial mailing is supplemented with

three follow-up contacts (the final contact which includes a replacement questionnaire is sent by certified mail). Response rates on the initial mailing have varied between 18 and 27 percent in five studies conducted by Dillman et al. In our research, it was hoped that this rate could be improved upon and that the analysis could be made on a larger percentage of completed questionnaires.

A cover letter was included with each of the questionnaires explaining the purpose of the study (a copy is attached to this report) and appealing to the recipient to complete the questionnaire and return it. A stamped, addressed envelope was also included for convenience in returning the questionnaire.

Questionnaires were mailed to respondents on the 25th and 28th of October. Initial returns started coming back on November 1 and by November 22, a total of 144 questionnaires had been received. An additional 15 questionnaires were returned by local post offices because they were undeliverable. These 15 individuals could not be reached either because they had moved from the area and had left no forwarding address or they were deceased. The number of potential respondents was thus decreased from 360 to 345. This means that 42 percent of the potential respondents had completed and returned their questionnaires within three weeks of the initial mailing. These figures compare very favorably with those obtained from other mail surveys. For example, in five studies conducted in several different states, Dillman et al. (1974) obtained an average return rate of 22 percent to their initial mailing. Our rate is almost double this figure and is higher than the rate obtained in three of their five studies even after a second mailing.

Overall, the response to the mailed questionnaire must be considered as good. Given additional time, the rate could have been improved, but the data base obtained is more than adequate.

Research Results

The first question included in the survey instrument was designed to determine the extent to which residents in the local area were familiar with the proposed action. Table 1 shows responses to this question. Most of the residents of Beaver and Iron Counties had heard about the proposed development. Only two percent of the respondents indicated that they hadn't heard anything at all about it. All of the latter were residents of Iron County. All of the Beaver County respondents (where the impacts will be greatest) had heard at least something about the project. For the entire impact area, then, virtually all respondents had heard "something" about it, but a much smaller percentage (28 percent) indicated that they had heard "a good deal." As would be expected, familiarity with the proposal increased with proximity to the primary impact site. A total of 36 percent of the Milford area respondents indicated that they had heard a good deal about the proposal.

Those who claimed to be knowledgeable about the alunite development demonstrated this in the second question which asked for a brief summary of what had been heard. The following is a fairly typical response from those respondents: "It is to be a large operation utilizing surface-mining to recover alunite ore, plus a large mill that will use a new method for the extraction of aluminum from that ore." Many simply indicated that they had heard "all that had been said or printed" about the project.

Table 1. Public Familiarity with the Proposed Alunite Development

	Percent Indicating They Had:		
	Heard Nothing	Heard Something But Knew Few Details	Heard A Great Deal
Combined Samples	2	70	28
Milford	0	64	36
Beaver County	0	86	14
Iron County	7	68	24

Respondents indicating less knowledge were much less explicit and gave fewer details in their answers to the second question. Overall, almost all respondents from the two-county area had heard of the proposed action and a significant percentage (which increases as one moves closer to the proposed site) exhibited a high level of information in regard to the project. These findings support the contention of many local leaders that the project has attracted perhaps more local interest and attention than any other issue to surface in the area in recent years.

Concerning the source of information that people have on the issue, it appears evident that most of this information comes from one or both of two sources: 1) local newspapers and other media accounts, and 2) discussions with friends, family members, and local community leaders. Table 2 presents information on the percentage of respondents who had attended public meetings on the issue. The first question asked if the respondent had attended public meetings or hearings where plans for the proposed development were discussed. The second question asked if the respondent had attended meetings or hearings where persons opposed to the development presented their case.

Just 14 percent of the respondents had attended public meetings where plans for the plant and mine were discussed. Again, the percentage frequency for attendance at such meetings increases as proximity to the plant site increases. A total of 20 percent of the respondents from the Milford area had attended public meetings or hearings. Only 10 percent of residents from other sections of Beaver County and from Iron County had attended such meetings.

Table 2. Attendance at Public Meetings or Hearings on the Alunite Development

	Percent Having Attended Meetings Where Plans For The Development Were Discussed	Percent Having Attended Meetings Where Opponents Presented Their Case
Combined Samples	14	1
Milford	20	0
Beaver County	10	3
Iron County	10	0

Turning to the question of attendance at meetings where opponents to the development presented their case, only one of the respondents had been at such a meeting. Perhaps this is explained by the fact that it is difficult to find much active opposition in the two-county area. Organized environmental groups that frequently take anti-development positions at public meetings and hearings seem to have taken little interest in the project. Local leaders of such groups have indicated that they have other environmental concerns in other parts of Utah that merit greater concern. In sum, there appears to be little, if any, organized local opposition to the proposed action as reflected in attendance and participation at meetings. Many persons have attended public meetings where plans for the mine and plant were discussed but the majority of local residents have gotten whatever information they have about the proposed development either from media sources or from interpersonal discussions.

The next set of questions in the questionnaire were designed to ascertain what local citizens perceived would be the primary advantages and disadvantages of the development for their area. Table 3 presents a summary of the responses to the question, "What do you think will be the major advantages for you and your community if the mine and plant go in as proposed?"

The most frequently mentioned advantage that respondents felt would result is a major increase in job and employment opportunities. As was noted in the main body of this report, Beaver County has been characterized by several decades of population decline. Much of this decline has resulted from lack of local employment opportunities, which has led to the emigration of many of the young people following high school graduation. Thus,

Table 3. Perceived Major Advantages Likely to Result from the Alunite Development^a

Perceived Advantages	Number of Times Mentioned
Jobs and Employment Opportunities	105
Increase in Local Business and Economic Stabilization	67
Increase in Tax Base	51
More People	34
Better Schools	33
Improved Shopping Facilities	21
General Community Development	16
Improved Housing	11
Improved Recreational Opportunities	10
Others	34

^a Each respondent could list more than one factor.

industrial development that will provide increased employment opportunities is generally viewed most favorably. This is reflected in the frequent mention of the provision of new jobs as being the major advantage that would accrue. Fully 75 percent of all respondents mentioned the provision of more job opportunities as one of the major advantages that would result.

The second and third most frequently mentioned advantages were also economic factors. Sixty-seven of the respondents (almost 50 percent) indicated that the proposed action would lead to an increase in local business and to an overall stabilization of the local economy. An additional 51 respondents mentioned an increased tax base as being one of the major advantages that would result.

Thirty-four respondents felt that the increase in local population resulting from the increased employment opportunities provided would be a major advantage. Again, this must be viewed in light of long-term trends of population decline in the local area. Other frequently mentioned advantages include better schools, shopping facilities, recreational opportunities, and housing. Finally, many respondents stated that the project would lead to general local community development and overall improvement, though they did not identify specific areas in which they felt this was likely to occur.

After indicating what they felt would be the major advantages, sample participants were requested to respond to the following question: "What do you see as the major disadvantages for you and your community if the alunite mine and plant are developed?" Table 4 represents a summary of responses to this question.

Table 4. Perceived Disadvantages Likely to Result from the Alunite Development^a

Perceived Disadvantage	Number of Times Mentioned
There Won't Be Any	59
Undesirable People Will Move In	28
Increase in Crime, Drug Use, and Law Enforcement Problems	25
Too Many People	23
Increased Pollution and Ecological Problems	20
Burden on Sewer and Water	13
Housing Problems	12
Crowding in Schools	11
Others	26

^aEach respondent could list more than one factor.

As shown in that table, the most frequent answer was that there wouldn't be any disadvantages. Fifty-nine respondents, or almost half of the total sample, said that they didn't expect that project development would result in any major disadvantages. Of those who thought there would be some disadvantages, the most frequently mentioned items had to do with characteristics of the people that would move into the area. Twenty-eight persons responded that the new mine and plant would bring to the area "undesirable people." An additional 25 respondents felt there would be an increase in crime, drug use, and in more general law-enforcement problems. This type of response is closely related to the previous question in that the perceived increase in crime and related problems is no doubt seen as traceable to the new residents.

A total of 23 respondents simply felt that there would be "too many people" as a result of the anticipated growth. Similar views were apparently held by another 11 persons who thought there would be crowding in the schools, and 12 persons who felt there would be serious pressures on local housing. A total of 20 respondents expected an increase in pollution and other ecological problems. Other disadvantages listed by the sample of respondents included the following: it would place a burden on city water and sewage facilities, it would affect local wildlife and hunting, it would bring in people of other religions, it would increase taxes, and it would cause an increase in the prices paid by local residents for a variety of goods and services.

It is significant to note that in response to the open-ended questions on advantages and disadvantages, the cumulative total of advantages listed was 382 (many, of course, were listed numerous times) and the total of

disadvantages listed was 158. This may be taken as a general indication of how local residents perceive the proposed project.

The next set of questions were designed to assess the residents of Beaver and Iron Counties perceptions of the major social impacts on their communities and life style. First, respondents were asked to rate their communities on a series of items ranging from various social service delivery systems to local recreational opportunities and effectiveness of local governments. The purpose of these questions was to establish something analogous to a baseline against which perceived social impacts could be compared. Table 5 shows the rating that respondents gave their community on the 13 items that were included in the questionnaire.

The best overall rating was given on the question of the quality of local communities as places to raise a family. Sixty-nine percent of all respondents stated that they considered their communities as excellent places to raise a family. An additional 26 percent indicated that their communities were good places to raise a family. Only 5 percent gave a fair rating and no respondents felt that their community deserved a poor rating. Following closely behind this item was that dealing with the absence of a polluted environment. Sixty-three percent of all respondents felt that their community deserved an excellent rating on this item and an additional 31 percent of the sample gave their community a good rating. Only 6 percent of all respondents gave their community only a fair or poor rating.

On several of the other items, community residents gave what can generally be seen as a strong positive vote. For example, on the item concerning the adequacy of health and medical facilities, 82 percent gave

Table 5. Community Rating on Selected Items^a

	Percent Rating Community As:			
	Excellent	Good	Fair	Poor
1. As a place to raise a family	69	26	5	0
2. As a place with adequate health and medical facilities	43	39	16	2
3. Quality of schools	33	53	15	0
4. Adequacy and quality of water supply	36	43	16	5
5. Recreational opportunities	27	34	23	17
6. Opportunities for cultural refinement (theater, art, etc.)	12	15	27	47
7. Availability of good jobs for young people	0	13	28	59
8. Opportunity for earning a livable income	2	24	47	26
9. Availability of suitable housing	3	15	50	32
10. Adequacy of law enforcement and police protection	14	45	34	7
11. Absence of a polluted environment	63	31	4	2
12. Availability of good shopping facilities	13	25	29	33
13. Effectiveness of local and county governments in meeting community problems	9	48	37	6

^aTotals do not always equal 100% because of rounding error.

their community either an excellent or a good rating. Eighty-six percent of the sample rated the quality of local schools as either good or excellent. Seventy-nine percent indicated that the adequacy and quality of the local water supply deserved either an excellent or a good rating, and 61 percent of all respondents felt that local recreational opportunities were good or excellent.

Alternatively, several of the items listed received almost strong negative responses. A total of 87 percent of the sample indicated that the availability of good jobs for young people in the local area left a great deal to be desired. Fifty-nine percent felt that such opportunities were poor and an additional 28 percent felt they were only fair. There was significant variation by community on this item. Fully 80 percent of all respondents from the Milford area gave their community a poor rating on this item and the remaining 20 percent gave only a fair rating. The situation in the rest of Beaver County was not perceived to be much better. Cedar City residents, however, felt their community rated higher on this item. Other items receiving negative ratings included the following: Eighty-two percent of the respondents felt that the opportunities to obtain suitable housing were only fair or poor. Seventy-four percent felt that opportunities for cultural refinement such as theater and art were only fair or poor, 73 percent felt that the opportunity for earning a livable income was only fair or poor, and 62 percent indicated that the availability of good shopping facilities was just fair or poor.

Given these current ratings of local communities, what did the respondents feel would be the impact of the proposed action on them? The next question read as follows: "Some people have suggested that if the

alunite mine and plant are developed in this area, many important changes will occur. Each of the statements which follow deals with changes that some feel will result. We are interested in whether or not you agree with these statements ... Please indicate if you strongly agree (SA) with each statement, if you agree (A) with it, if you are neutral (N), if you disagree (D), or if you strongly disagree (SD)." Table 6 shows the items that were included in this question and the responses to each of the items.

A majority of the respondents clearly felt that the development would bring with it much positive community and social change. In order to minimize response bias, some of the items were written in a positive manner while others were worded in the negative. A general overall summary of the results would be that local residents in the primary impact area expected good things to occur and bad things not to occur. Looking first at items that recieved the strongest negative rating on the previous set of questions, it can be seen that most residents felt that the action would generally change these for the better. The most negative community rating on the previous items was given on the question concerning the availability of jobs for young people. Each respondent was asked if with the alunite development "there will be more jobs available so that our young people will be able to remain here rather than have to move away." Fully 95 percent of the sample agreed or strongly agreed with this statement. Four percent were neutral and only one percent disagreed. Clearly, an overwhelming percentage of the sample felt that what they had defined as the most negative characteristic of their local communities would be drastically changed. As expected, agreement with this item increased as one approached

Table 6. Perceived Community and Life Style Changes Resulting from the Proposed Development

	Percent of Respondents Indicating That They:				
	Strongly Agree (SA)	Agree (A)	Neutral (N)	Disagree (D)	Strongly Disagree (SD)
1. We will have more money for better schools.	29	56	8	8	1
2. There will be more jobs available so that our young people will be able to remain here rather than have to move away.	50	45	4	1	0
3. There will be a great deal of pollution that will affect our crops, grazing and recreation areas.	3	6	29	38	24
4. This community will become a less desirable place to raise a family	5	20	21	39	15
5. Because of the difficulty in accommodating a large number of new students, the quality of our schools will decline.	1	14	14	55	16
6. We will have more money to provide additional recreational and cultural opportunities.	14	58	16	11	1
7. There will be major problems with meeting the housing needs of new residents.	23	48	13	14	2
8. More and better quality shopping facilities will be made available.	17	57	17	8	2
9. People will be less united and friendly because of the influx of many newcomers.	6	27	19	42	7
10. There will be an increase in crime and illegal drug use.	10	46	21	20	2
11. We will have better community medical facilities and health care.	6	44	26	21	4
12. Local people will lose control over important decisions that affect community life.	6	16	18	51	9
13. The church will become a less important factor in local life.	4	12	15	52	18
14. Incomes for local people will improve.	15	65	12	8	0
15. Water that is badly needed for other purposes will be used up by the plant.	2	8	25	48	16

the primary impact site. Over 98 percent of the residents of the Milford area were convinced that enough new jobs would be created so that their young people would no longer have to leave home in search of employment opportunities elsewhere.

As indicated above, most residents of the two-county area felt that there were some rather serious problems in the local area in terms of availability of suitable housing, and many were convinced that this would remain a problem. Seventy-two percent of the respondents agreed or strongly agreed with the statement that "there will be major problems with meeting the housing needs of new residents." What is already a tight housing market promises to become even more so with the influx of new residents. In the earlier questions, 74 percent of the sample had rated their community as only fair or poor in terms of the availability of cultural opportunities. Most perceived that this problem would be alleviated by the new development. Seventy-two percent either agreed or strongly agreed with the statement that "we will have more money to provide additional recreational and cultural opportunities." More than 73 percent of the respondents indicated that opportunities for earning a livable income in the local communities were not good. In terms of perceived change resulting from the development, 80 percent agreed or strongly agreed with the statement that "incomes for local people will improve." Sixty-two percent of the sample earlier indicated that local shopping facilities were inadequate. Seventy-four percent now responded in agreement with the statement that "more and better quality shopping facilities will be made available." Expectations are obviously high that those

characteristics that now deserve a negative rating will be improved as a result of the proposed development.

It is also important to assess perceived impacts on other variables. For example, do local residents feel that what are now positive characteristics of their communities will change for the worse? Ninety-five percent of all respondents indicated their communities were good or excellent places in which to raise a family. A minority felt that this would change. Twenty-five percent either agreed or strongly agreed with the statement that "this community will become a less desirable place in which to raise a family." In other words, some respondents felt that there would be a change for the worse; a clear majority did not. Community residents generally ranked the availability and adequacy of health care in the local area as very good. Fifty percent felt this would get even better. Eighty-six percent of the respondents gave their local schools a good or excellent rating. With the alunite development, 85 percent felt that more money would be available for better schools, and only 15 percent either agreed or strongly agreed with the statement that "because of the difficulty in accommodating a large number of new students, the quality of our schools will decline." In sum, most respondents felt that those things that already made their community a good place to live would not change drastically for the worse. Instead, even many of these things were likely to show additional improvement.

A significant percentage of respondents do perceive some changes for the worse, however. Fifty-six percent of the sample agreed with the statement that "there will be an increase in crime and illegal drug use." Thirty-three percent agreed that "people will become less united and

friendly because of the influx of many newcomers." Sixteen percent felt that the church will become a less important factor in local life. Conversely, only nine percent perceived that "there will be a great deal of pollution that will affect our crops, grazing and recreational areas," and only ten percent felt that "water that is badly needed for other purposes will be used up by the plant."

While the above analysis indicates that local residents overwhelmingly expect good things from the proposed development, this may present somewhat of a problem. Unrealistically high expectations may contribute to growing feelings of betrayal and alienation if such expectations are not realized. In other words, rather than needing to sell their product, company officials and local community leaders may be faced with the task of making more realistic the expectations of local residents and preparing them for the very significant social and community impacts that will change the very nature of local communities and life styles.

Several other attitude items were included in the questionnaire to assess more generally local attitudes toward industrial growth and development. The two questions that related most specifically to the proposed development were stated as follows: 1) "In the long run, I am sure that we will be better off if the alunite development occurs," and 2) "The construction of the plant and mine will be one of the best things that ever happened in our part of the state." Table 7 shows the responses of the sample to these questions.

In response to the first question, 87 percent of all respondents either agreed or strongly agreed that they would be better off. More than 96 percent of the residents in the Milford area either agreed or strongly

Table 7. General Attitudes Toward the Alunite Development in Beaver and Iron Counties

	Percent of Respondents Indicating That They:				
	Strongly Agree (SA)	Agree (A)	Neutral (N)	Dis- agree (D)	Strongly Disagree (SD)
1. "In the long run I am sure that we will be better off if the alunite development occurs."	35	52	9	3	1
2. "The construction of the plant and mine will be one of the best things that ever happened in our part of the state."	33	40	21	5	2

agreed with this statement. Almost as much support was found in other areas of Beaver County with slightly less agreement shown by residents of Iron County. In terms of the second question, 73 percent of the combined samples agreed or strongly agreed that the proposed action would be one of the best things that has ever happened in their area. Again, even greater support is registered in the Milford area, as only four percent of the respondents disagreed with the statement.

The next question again dealt with perceptions of likely changes that may result. Frequently, some rural communities have perceived industrialization as the panacea that would solve all local problems because of the expansion of employment opportunities and local tax base that such development would bring to the community. Alternatively, some may expect that their own taxes may increase to meet the greatly expanded needs that are created in the service delivery sector as a consequence of rapid population growth. Respondents were asked to indicate whether they expected taxes in their community to increase, remain the same, or decrease. Table 8 shows responses to this question. Forty percent expect that local taxes will increase while another 43 percent feel that, at best, they will remain about the same. Seventeen percent indicate an expectation that taxes will decline.

It was noted above that a very large majority of local residents give their community a high rating in terms of being free from pollution. Two additional questions were included in the questionnaire to again assess these feelings and to determine the amount of change expected. First, respondents were asked to rate the seriousness of environmental pollution

Table 8. Perceived Impacts on Local Taxes

	Percent Expecting Taxes To:		
	Increase	Remain the Same	Decrease
Combined Sample	40	43	17
Milford	43	32	25
Beaver County	32	52	16
Iron County	40	50	10

in the United States generally, in their own state, and then in their local area. Next, they were asked to assess how serious the problem of pollution would be in the local area with the development of the mine and processing plant. Table 9 presents relevant data on these questions.

Perceived seriousness of pollution decreases as the perspective changes from national to local. Ninety-nine percent of the sample indicated that pollution in the United States is either a serious or a moderate problem. On the state level this drops to 67 percent (only five percent perceive the problem as serious with an additional 62 percent perceiving the problem as moderate). On the local level, only three percent of the combined samples perceived the problem of environmental pollution as serious or moderate, 69 percent felt that it was no problem, and an additional 28 percent felt the problem was minor.

The development of the mine and plant was perceived by many as likely to have some effects on the local environment. While the number who perceived that environmental pollution would become serious increased by only one percentage point, the number that felt the problem would become moderate climbed by 21 points. Thirty-five percent continued to feel that there would be no problem with pollution, and 40 percent felt the problem would be a minor one. Overall, respondents felt that they had a very clean environment that would be impacted somewhat negatively. However, even with the development they did not feel that their environment would become nearly as bad as that which already exists in many parts of the United States or in other parts of Utah.

Table 9. Perceived Seriousness of the Problem of Pollution

	At Present			If The Alunite Development Occurs
	In The U.S.	In Utah	In The Local Area	
A Serious Problem	59	5	1	2
A Moderate Problem	40	62	2	23
A Minor Problem	1	30	28	40
No Problem	0	4	69	35

The final question that is of special concern was designed to pull together into a single summary statement the feelings of the sample of respondents toward the proposed action. As indicated above, numerous questions had already been asked to determine familiarity with plans for the development, perceived advantages and disadvantages that would accrue to the local community, and perceived impacts on local individuals, communities, and life styles. To attempt to draw this all together, respondents were finally asked to respond to the following question: "In terms of your own attitudes toward the proposed alunite mine and mill, would you say that you are: 1) unconditionally in favor of the development, 2) generally in favor, though there may be some reservations, 3) generally opposed, or 4) unconditionally opposed to the development." Table 10 presents the summary results on this question. As would be expected from the data and analysis presented, local residents indicated strong support. Fifty percent of the combined sample stated that they were unconditionally in favor of the proposal. An additional 47 percent indicated that they were generally in favor, though they held a few reservations. Only two percent indicated general opposition and only one person from the total sample stated unconditional opposition.

Though this overall level of support is impressive, it becomes even stronger as one approaches the proposed primary impact site. Ninety-eight percent of the respondents from Milford and the immediate vicinity expressed support for the proposal and 100 percent of the residents of the remainder of Beaver County expressed support (unconditional support was somewhat higher in Milford than in the remainder of the county).

Table 10. Summary of Attitudes of Local Residents Toward the Proposed Alunite Development

	Percent Indicating They Were:			
	Uncondi- tionally In Favor	Generally In Favor	Generally Opposed	Uncondi- tionally Opposed
Combined Samples	50	47	2	1
Milford	65	33	0	2
Beaver County	42	58	0	0
Iron County	33	59	8	0

In summary, results from questionnaires completed by samples of residents from Beaver County and Iron County indicate overwhelming support for the proposed action. It is hard to imagine any other issue of which one would obtain such a consensus. While such results must be gratifying to those most intimately related to the alunite project, they also suggest that some cautions are in order. Most importantly, a clear trust is being expressed in those who propose the development. To the degree that local expectations are not fulfilled, those most intimately involved face the possible consequence of feelings of disillusionment and alienation. However, the overwhelming support indicated should also provide the base for drawing together the local people to respond in an efficient and effective manner to those social and community changes that are forthcoming.

References

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EXHIBIT I

Cover Letter

Dear Resident of Southern Utah:

Perhaps you have heard about the Alunite mine and processing plant that have been proposed for the area near Milford, Utah and approximately 60 miles northwest of Cedar City. We have contracted with Earth Sciences, Inc. to prepare a socio-economic impact study for the proposed development. The purpose of the study is to identify important changes that will be occurring in your area as a result of this new development and to provide community leaders with information that they will find useful in planning for those changes.

In order to do this, we have carefully chosen a sample of residents in your area to try and get a feel for local attitudes toward the proposed Alunite development. We would very much appreciate it if you would take a few minutes and fill out the enclosed questionnaire. An addressed, stamped envelope is provided for your convenience in returning the questionnaire to us. It is very important that everyone who receives this questionnaire return it, since only a sample of citizens have been selected.

You may be assured of complete anonymity. Each questionnaire contains an identification number for mailing purposes only. This is so that we may check names off the mailing list when each questionnaire is returned. Your name will not be placed on the questionnaire. The results will be analyzed in such a way that answers on any single questionnaire cannot be identified.

We shall be most happy to answer any questions you might have about the study. Please write or call if you do have any questions. The telephone number is 374-1211, Extension 2036.

Thank you for your assistance.

Sincerely,

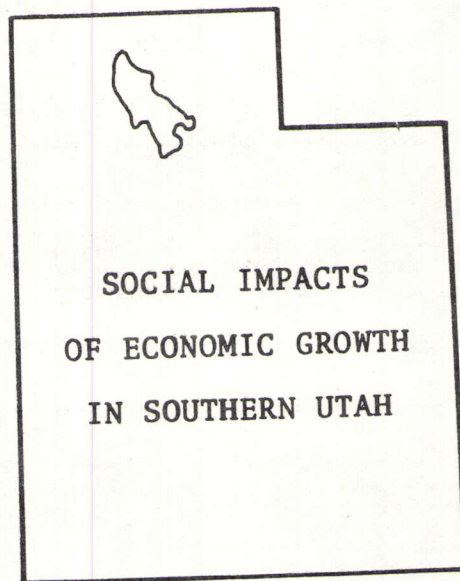


Stan L. Albrecht
Project Director

SLA:fec

EXHIBIT II

Questionnaire



The following questions are asked to determine the reactions of residents of Beaver and Iron Counties to the Alunite development that is proposed for the area in the southern portion of the Wah Wah Mountain range. Before further planning and feasibility studies can be undertaken, it is necessary that a socio-economic impact study be completed. Responses to this questionnaire will make up an important part of that impact study. Therefore your response to the questions is very important.

The answers you give are strictly confidential. Each questionnaire is numbered so that we can keep track of which ones have been returned. No name will ever be associated with a questionnaire and once the questionnaires are returned, responses will be treated for statistical purposes only. Your assistance in this research effort is much appreciated.

1. How much have you heard about the proposed Alunite mine and plant?

1. I haven't heard anything at all about it.
2. I have heard something, but really know few of the details.
3. I have heard a good deal about the proposed development.

2. If you have heard something, would you mind summarizing for us in a couple of sentences what you have heard?

3. Do you recall the source of your information on this issue? _____

4. Have you ever attended any public meetings or hearings where the plans for the Alunite mine and plant were discussed?

1. Yes
2. No

5. Have you ever attended public meetings where persons opposed to the development presented their case?

1. Yes
2. No

6. What do you think will be the major advantages for you and your community if the mine and plant go in as proposed?

1. _____
2. _____
3. _____
4. _____
5. _____

7. Will it affect the employment situation?

1. Yes
2. No

8. If yes, approximately how many persons do you think will be employed? _____
9. What do you see as the major disadvantages for you and your community if the Alunite mine and plant are developed?
1. _____
 2. _____
 3. _____
 4. _____
 5. _____
10. Will there be any problem with pollution? Please explain _____

11. How many years have you lived in this community? _____
12. How well satisfied are you with living in this community?
1. Not at all satisfied.
 2. Not very much satisfied.
 3. Pretty much satisfied.
 4. Very much satisfied.
13. When it comes to a place to live, almost any place has some things about it we like and some we dislike.
- a. What are some of the main things you like about living in this community?
 1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 - b. What are some of the main things you dislike about it?
 1. _____
 2. _____
 3. _____

4. _____

5. _____

14. Which of the following statements best describes how you would feel about moving away from this community, if presented with that opportunity?

1. I would never consider leaving here.
2. I would move to another community if I had to, but would be reluctant to leave here.
3. It makes no difference to me whether I live here or in another community.
4. I would probably be more satisfied living in another community.
5. I would really like to leave this community if I had the opportunity.

15. Would you please rate the community where you now live on each of the following:

	<u>Excellent</u>	<u>Good</u>	<u>Fair</u>	<u>Poor</u>
1. As a place to raise a family	()	()	()	()
2. As a place with adequate health and medical facilities	()	()	()	()
3. Quality of schools	()	()	()	()
4. Adequacy and quality of water supply	()	()	()	()
5. Recreational opportunities	()	()	()	()
6. Opportunities for cultural refinement (theater, art, etc.)	()	()	()	()
7. Availability of good jobs for young people	()	()	()	()
8. Opportunity for earning a liveable income	()	()	()	()
9. Availability of suitable housing	()	()	()	()
10. Adequacy of law enforcement and police protection	()	()	()	()
11. Absence of a polluted environment	()	()	()	()
12. Availability of good shopping facilities	()	()	()	()
13. Effectiveness of local and county governments in meeting community problems	()	()	()	()

16. Some people have suggested that if the Alunite mine and plant are developed in this area, many important changes will occur. Each of the statements which follow deal with changes that some feel will result. We are interested in whether or not you agree with these statements. There are no right or wrong answers; we are only interested in your opinions. Please indicate if you strongly agree (SA) with each statement, if you agree (A) with it, if you are neutral (N), if you disagree (D), or if you strongly disagree (SD).

- | | | | | | |
|--|----|---|---|---|----|
| 1. We will have more money for better schools. | SA | A | N | D | SD |
| 2. There will be more jobs available so that our young people will be able to remain here rather than have to move away. | SA | A | N | D | SD |
| 3. There will be a great deal of pollution that will affect our crops, grazing and recreation areas. | SA | A | N | D | SD |
| 4. This community will become a less desirable place to raise a family. | SA | A | N | D | SD |
| 5. Because of the difficulty in accommodating a large number of new students, the quality of our schools will decline. | SA | A | N | D | SD |
| 6. We will have more money to provide additional recreational and cultural opportunities. | SA | A | N | D | SD |
| 7. There will be major problems with meeting the housing needs of new residents. | SA | A | N | D | SD |
| 8. More and better quality shopping facilities will be made available. | SA | A | N | D | SD |
| 9. People will be less united and friendly because of the influx of many newcomers. | SA | A | N | D | SD |
| 10. There will be an increase in crime and illegal drug use. | SA | A | N | D | SD |
| 11. We will have better community medical facilities and health care. | SA | A | N | D | SD |
| 12. Local people will lose control over important decisions that affect community life. | SA | A | N | D | SD |
| 13. The church will become a less important factor in local life. | SA | A | N | D | SD |
| 14. Incomes for local people will improve. | SA | A | N | D | SD |
| 15. Water that is badly needed for other purposes will be used up by the plant. | SA | A | N | D | SD |

The following questions are concerned with your opinions toward several other issues related to the proposed Alunite development and to industrial development more generally. Again, would you please indicate whether you strongly agree, agree, are neutral, disagree, or strongly disagree with each statement.

17. In the long run, I am sure that we will be better off if the Alunite development occurs. SA A N D SD
18. The construction of the plant and mine will be one of the best things that ever happened in our part of the State. SA A N D SD
19. Only by fully utilizing its great natural resources can Utah enjoy the economic benefit which is its birthright. SA A N D SD
20. As badly as we need new industry and jobs, we cannot afford to sacrifice our clean air and beautiful scenery to attain them. SA A N D SD
21. Industries should be forced to shut down if they refuse to meet government pollution standards. SA A N D SD
22. Despite the possibility of some damage to the environment, Utah needs to develop its natural resources. SA A N D SD
23. One person's right to a clean environment is not as important as another's right to gainful employment. SA A N D SD
24. There is too much concern for restricting economic growth and not enough concern for encouraging it. SA A N D SD
25. We cannot afford to let policies claiming to promote "environmental quality" prevent the continued economic development of Utah. SA A N D SD
26. Where natural resources are privately owned, society should have no control over what the owner does with them. SA A N D SD

-
27. Do you expect taxes in your community to increase, remain the same, or decrease if the Alunite development occurs?

1. Increase

2. Remain the same a. Please explain _____
 3. Decrease _____

28. Concerning the question of environmental pollution, how serious would you say the problem is now?

	<u>In the U. S.</u>	<u>In Utah</u>	<u>In your local area</u>
1. Serious problem	_____	_____	_____
2. Moderate problem	_____	_____	_____
3. Minor problem	_____	_____	_____
4. No problem	_____	_____	_____

29. How serious do you feel the problem of pollution will be in this area if the new mine and mill are developed?

1. Serious problem _____ 4. No problem _____
 2. Moderate problem _____
 3. Minor problem _____

30. In terms of your own attitudes toward the proposed Alunite mine and mill, would you say that you are:

1. Unconditionally in favor of the development.
 2. Generally in favor, though I have some reservations.
 3. Generally opposed.
 4. Unconditionally opposed to the development.

For studies like this, answers to questions are classified according to age, sex, income, education, etc. We would like to end by asking you a few questions about yourself for this purpose.

31. Sex of respondent

1. Male
 2. Female

32. Your present marital status

1. Never married 3. Divorced 5. Widowed
 2. Married 4. Separated

33. Number of children in each age group (if none, write "0")

_____ Under 5 years of age	_____ 19 to 24
_____ 5 to 13	_____ 25 and over
_____ 14 to 18	

34. What is your present age? _____ (years)
35. What is the highest level of education that you have completed?
- | | |
|---------------------------|---|
| 1. No formal education | 7. Completed college (specify major) _____ |
| 2. Some grade school | 8. Some graduate work |
| 3. Completed grade school | 9. Graduate degree (specify degree and major) _____ |
| 4. Some high school | |
| 5. Completed high school | |
| 6. Some college | |
36. Are you presently:
- | | | |
|-----------------------|---------------|------------------------|
| 1. Employed full-time | 3. Unemployed | 5. Full-time homemaker |
| 2. Employed part-time | 4. Retired | |
37. Please describe the usual occupation of the principal wage earner in your household. If retired, describe the usual occupation before retirement.
- Title _____
- Kind of work you do _____
38. What was your approximate family income from all sources, before taxes, in 1973?
- | | | |
|-----------------------|-------------------------|------------------|
| 1. Less than \$3,000 | 4. \$7,000 to \$9,999 | 7. Over \$16,000 |
| 2. \$3,000 to \$4,999 | 5. \$10,000 to \$12,999 | |
| 3. \$5,000 to \$6,999 | 6. \$13,000 to \$15,999 | |
39. What is your religious preference?
- | |
|--|
| 1. Catholic |
| 2. Protestant (specify denomination) _____ |
| 3. L. D. S. |
| 4. Other (specify) _____ |
| 5. None |
40. Do you consider yourself to be:
- | |
|--------------------------|
| 1. Republican |
| 2. Democrat |
| 3. Independent |
| 4. Other (specify) _____ |

Thank you very much for your assistance on this project.